

MV-22 MAINTENANCE TRAINING



MV-22 MOS 6156

MV-22 MAINTENANCE TRAINING



LESSON GUIDE NUMBER: MV-22 6156 B.01 (A thru I)

REQUIRED SCHEDULED/UNSCHEDULED INSPECTIONS

- A. LECTURE NUMBER:** MOS 6156 B.01 (A thru I)
- B. TIME:** 1 HOUR
- C. DATE PREPARED:** 13 August 2002
- D. DATE REVIEWED:** On separate sheet
- E. TITLE:** REQUIRED SCHEDULED/UNSCHEDULED INSPECTIONS
- F. OBJECTIVE:** The objective of this period of instruction is to introduce and familiarize all maintenance personnel with the required scheduled and unscheduled inspections performed on the MV-22.
- G. REFERENCE:** IETMS (S/S/S 0500) Corrective actions
- H. PRESENTATION:**
1. Present to the student(s) a presentation on the required scheduled and unscheduled inspections performed on the MV-22.
 - a. Periodic Maintenance Information Cards
 - b. Turnaround Checklist Requirement Cards
 - c. Daily/Servicing/Special/Preservation/Conditional Requirement Cards
 - d. Special Preservation/Conditional ASPA
 - e. Phase Maintenance Requirement Cards
 - f. Perform A-Phase Inspection
 - g. Perform B-Phase Inspection
 - h. Perform C-Phase Inspection
 - i. Perform D-Phase Inspection
 - j. Perform Acceptance/Transfer Inspection
 - k. Perform Major Structural Inspection On Hard Landing, Overstress, Etc.

l. Perform 14 Day Inspection

m. Perform 28 Day/35Hrs Inspection

n. Perform Preservation/Depreservation Inspection

I. SUMMARY: During this period of instruction we have discussed the required scheduled and unscheduled inspections performed on the MV-22.

J. QUESTIONS AND ANSWERS:

MV-22 MAINTENANCE TRAINING



LESSON GUIDE NUMBER: MV-22 6156 B.02 (A thru G)

**TECHNICAL DIRECTIVES
CHANGES/BULLETINS**

- A. LECTURE NUMBER:** MOS 6156 B.02 (A thru G)
- B. TIME:** 1 HOUR
- C. DATE PREPARED:** 13 August 2002
- D. DATE REVIEWED:** On separate sheet
- E. TITLE:** TECHNICAL DIRECTIVES CHANGES/BULLETINS
- F. OBJECTIVE:** The objective of this period of instruction is to introduce and familiarize all maintenance personnel to technical directives, changes, and bulletins on the MV-22.
- G. REFERENCE:** IETMS
- H. PRESENTATION:**
1. Present to the student(s) a presentation on the technical directives, changes and bulletins on the MV-22.
 - a. Technical Directives System
 - b. Rapid Action Minor Engineering Change (RAMEC) Proposals
 - c. Interim Rapid Action Change (IRAC)
 - d. Rapid Action Change (RAC)
 - e. Incorporates Airframes Changes
 - f. Incorporates Airframes Bulletins
 - g. ERAC
- I. SUMMARY:** During this period of instruction we have discussed the technical directives, changes and bulletins on the MV-22.
- J. QUESTIONS AND ANSWERS:**

MV-22 MAINTENANCE TRAINING



LESSON GUIDE NUMBER: MV-22 6156 B.03 (A thru D)

CORROSION CONTROL

- A. LECTURE NUMBER:** MOS 6156 B.03 (A thru D)
- B. TIME:** 1 HOUR
- C. DATE PREPARED:** 13 August 2002
- D. DATE REVIEWED:** On separate sheet
- E. TITLE:** CORROSION CONTROL
- F. OBJECTIVE:** The objective of this period of instruction is to introduce and familiarize all maintenance personnel to corrosion control on the MV-22.
- G. REFERENCE:** NAVAIR 01-1A-509
- H. PRESENTATION:**
1. Present to the student(s) a presentation on corrosion control on the MV-22.
 - a. Perform Corrosion Detection During All Maintenance Actions
 - b. Perform Corrosion Prevention During All Maintenance Actions
 - c. Perform Corrective Action On Corrosion Discrepancies
 - d. Perform Corrosion Detection/Prevention On Support Equipment
- I. SUMMARY:** During this period of instruction we have discussed corrosion control on the MV-22.
- J. QUESTIONS AND ANSWERS:**

MV-22 MAINTENANCE TRAINING



LESSON GUIDE NUMBER: MV-22 6156 B.04 (A-1 thru A-5)

FLIGHT CONTROL SYSTEM THEORY OF OPERATION

A. LECTURE NUMBER: MOS 6156 B.04 (A-1 thru A-5)

B. TIME: 1 HOUR

C. DATE PREPARED: 24 January 2000

D. DATE REVIEWED: On separate sheet

E. TITLE OF LECTURE: FLIGHT CONTROL SYSTEM THEORY OF OPERATION

F. OBJECTIVE: The objective of this period of instruction is to introduce and familiarize all maintenance personnel with the theory of operation for the flight control systems on the MV-22.

G. INSTRUCTION AIDS: A1-V22AB-OTIS-000

H. REFERENCES: IETM (S/S/S 2700) Descriptive information

I. PRESENTATION:

1. Present to the student(s) a presentation on the theory of operation for the flight control systems on the MV-22.
 - a. Swashplate Actuator
 - b. Flaperon Actuator
 - c. Elevator Actuator
 - d. Conversion Actuator
 - e. Rudder Actuator

J. SUMMARY: During this period of instruction we have discussed the theory of operation for the flight control systems on the MV-22.

K. QUESTIONS AND ANSWERS:

MV-22 MAINTENANCE TRAINING



LESSON GUIDE NUMBER: MV-22 6156 B.04 (B-1 thru B-5)

**FLIGHT CONTROL SYSTEM
FUNCTIONAL CHECK REQUIRED**

A. LECTURE NUMBER: MOS 6156 B.04 (B-1 thru B-5)

B. TIME: 1 HOUR

C. DATE PREPARED: 24 January 2000

D. DATE REVIEWED: On separate sheet

E. TITLE OF LECTURE: FLIGHT CONTROL SYSTEM FUNCTIONAL CHECK

F. OBJECTIVE: The objective of this period of instruction is to introduce and familiarize all maintenance personnel with functional checks of the flight control system on the MV-22.

G. INSTRUCTIONAL AIDS: A1-V22AB-OTIS-000

H. REFERENCE: IETM (S/S/S 2700) Corrective Actions

I. PRESENTATION:

1. Present to the student(s) a presentation on functional checks of the flight control system on the MV-22.
 - a. Swashplate Actuator
 - b. Flaperon Actuator
 - c. Elevator Actuator
 - d. Conversion Actuator
 - e. Rudder Actuator

J. SUMMARY: During this period of instruction we have discussed functional checks for the flight control system on the MV-22.

K. QUESTIONS AND ANSWERS:

MV-22 MAINTENANCE TRAINING



LESSON GUIDE NUMBER: MV-22 6156 B.04 (C-1 Thru C-5)

FLIGHT CONTROL SYSTEM FAULT ISOLATION

- A. LECTURE NUMBER:** MOS 6156 B.04 (C-1 thru C-5)
- B. TIME:** 1 HOUR
- C. DATE PREPARED:** 24 January 2000
- D. DATE REVIEWED:** On separate sheet
- E. TITLE OF LECTURE:** FLIGHT CONTROL SYSTEM FAULT ISOLATION
- F. OBJECTIVE:** The objective of this period of instruction is to introduce and familiarize all maintenance personnel with fault isolation of the flight control system on the MV-22.
- G. INSTRUCTION AIDS:** A1-V22AB-OTIS-000
- H. REFERENCES:** IETM (S/S/S 2700) Troubleshooting
- I. PRESENTATION:**
1. Present to the student(s) a presentation on fault isolation of the flight control system on the MV-22.
 - a. Swashplate Actuator
 - b. Flaperon Actuator
 - c. Elevator Actuator
 - d. Conversion Actuator
 - e. Rudder Actuator
- J. SUMMARY:** During this period of instruction we have discussed fault isolation of the flight control system on the MV-22.
- K. QUESTIONS AND ANSWERS:**

MV-22 MAINTENANCE TRAINING



LESSON GUIDE NUMBER: MV-22 6156 B.04 (D-1 thru D-1.4)

ORGANIZATIONAL MAINTENANCE FOR THE SWASHPLATE ACTUATOR

A. LECTURE NUMBER: MOS 6156 B.04 (D-1 thru D-1.4)

B. TIME: 1 HOUR

C. DATE PREPARED: 24 January 2000

D. DATE REVIEWED: On separate sheet

E. TITLE OF LECTURE: ORGANIZATIONAL MAINTENANCE FOR THE
SWASHPLATE ACTUATOR

F. OBJECTIVE: The objective of this period of instruction is to introduce and familiarize all maintenance personnel with organizational maintenance for the swashplate actuators on the MV-22.

G. INSTRUCTION AIDS: A1-V22AB-OTIS-000

H. REFERENCE: IETM (S/S/S 2750) Corrective Actions

I. PRESENTATION:

1. Present to the student(s) a presentation on organizational maintenance for the swashplate actuators on the MV-22.
 - a. Inspect Swashplate Actuator
 - b. R & R
 - (1) Swashplate Actuator-Inboard
 - (2) Swashplate Actuator-Outboard
 - (3) Swashplate Actuator-Center

J. SUMMARY: During this period of instruction we have discussed organizational maintenance for the swashplate actuators on the MV-22.

K. QUESTIONS AND ANSWERS:

MV-22 MAINTENANCE TRAINING



LESSON GUIDE NUMBER: MV-22 6156 B.04 (D-2 thru D-2.2)

ORGANIZATION MAINTENANCE FOR THE FLAPERON

- A. LECTURE NUMBER:** MOS 6156 B.04 (D-2 thru D-2.2)
- B. TIME:** 1 HOUR
- C. DATE PREPARED:** 24 January 2000
- D. DATE REVIEWED:** On separate sheet
- E. TITLE OF LECTURE:** ORGANIZATION MAINTENANCE FOR THE FLAPERON ACTUATOR
- F. OBJECTIVE:** The objective of this period of instruction is to introduce and familiarize all maintenance personnel with organizational maintenance for the flaperon actuators on the MV-22.
- G. INSTRUCTION AIDS:** A1-V22AB-OTIS-000
- H. REFERENCE:** IETM (S/S/S 2750) Corrective actions
- I. PRESENTATION:**
1. Present to the student(s) a presentation on organizational maintenance for the flaperon actuators on the MV-22.
 - a. Inspect Flaperon Actuator
 - b. R & R Flaperon Actuator
- J. SUMMARY:** During this period of instruction we have discussed organizational maintenance for the flaperon actuators on the MV-22.
- K. QUESTIONS AND ANSWERS:**

MV-22 MAINTENANCE TRAINING



LESSON GUIDE NUMBER: MV-22 6156 B.04 (D-3 thru D-3.2)

ORGANIZATIONAL MAINTENANCE FOR THE ELEVATOR ACTUATOR

- A. LECTURE NUMBER:** MOS 6156 B.04 (D-3 thru D-3.2)
- B. TIME:** 1 HOUR
- C. DATE PREPARED:** 24 January 2000
- D. DATE REVIEWED:** On separate sheet
- E. TITLE OF LECTURE:** ORGANIZATIONAL MAINTENANCE FOR THE ELEVATOR ACTUATOR
- F. OBJECTIVE:** The objective of this period of instruction is to introduce and familiarize all maintenance personnel with organizational maintenance for the elevator actuators on the MV-22.
- G. INSTRUCTION AIDS:** A1-V22AB-OTIS-000
- H. REFERENCES:** IETM (S/S/S 2750) Corrective Actions
- I. PRESENTATION:**
1. Present to the student(s) a presentation on organizational maintenance for the elevator actuators on the MV-22.
 - a. Inspect Elevator Actuator
 - b. R & R Elevator Actuator
- J. SUMMARY:** During this period of instruction we have discussed organizational maintenance for the elevator actuators on the MV-22.
- K. QUESTIONS AND ANSWERS:**

MV-22 MAINTENANCE TRAINING



LESSON GUIDE NUMBER: MV-22 6156 B.04 (D-4 thru D-4.5)

ORGANIZATIONAL MAINTENANCE FOR THE CONVERSION ACTUATOR

- A. LECTURE NUMBER:** MOS 6156 B.04 (D-4 thru D-4.5)
- B. TIME:** 1 HOUR
- C. DATE PREPARED:** 24 January 2000
- D. DATE REVIEWED:** On separate sheet
- E. TITLE OF LECTURE:** ORGANIZATIONAL MAINTENANCE FOR THE
CONVERSION ACTUATOR
- F. OBJECTIVE:** The objective of this period of instruction is to introduce and familiarize all maintenance personnel with organizational maintenance for the conversion actuators on the MV-22.
- G. INSTRUCTION AIDS:** A1-V22AB-OTIS-000
- H. REFERENCE:** IETM (S/S/S 2750) Corrective Actions.
- I. PRESENTATION:**
1. Present to the student(s) a presentation on organizational maintenance for the conversion actuators on the MV-22.
 - a. Inspect Conversion Actuator
 - b. R & R
 - (1) Conversion Actuator
 - (2) Backup Hydraulic Power Drive Unit
 - (3) Manual Drive Assembly
 - (4) Primary Hydraulic Power Drive Unit
- J. SUMMARY:** During this period of instruction we have discussed the organizational maintenance for the conversion actuators on the MV-22.
- K. QUESTIONS AND ANSWERS:**

MV-22 MAINTENANCE TRAINING



LESSON GUIDE NUMBER: MV-22 6156 B.04 (D-5 thru D-5.1)

ORGANIZATIONAL MAINTENANCE FOR THE RUDDER ACTUATOR

A. LECTURE NUMBER: MOS 6156 B.04 (D-5 thru D-5.1)

B. TIME: 1 HOUR

C. DATE PREPARED: 24 January 2000

D. DATE REVIEWED: On separate sheet

E. TITLE OF LECTURE: ORGANIZATIONAL MAINTENANCE FOR THE RUDDER ACTUATOR

F. OBJECTIVE: The objective of this period of instruction is to introduce and familiarize all maintenance personnel with the organizational maintenance for the rudder actuators on the MV-22.

G. INSTRUCTION AIDS: A1-V22AB-OTIS-000

H. REFERENCE: IETM (S/S/S 2750) Corrective Actions

I. PRESENTATION:

1. Present to the student(s) a presentation on organizational maintenance for the rudder actuators on the MV-22.
 - a. R & R Rudder Actuator

J. SUMMARY: During this period of instruction we have discussed the organizational maintenance for the rudder actuators on the MV-22.

K. QUESTIONS AND ANSWERS:

MV-22 MAINTENANCE TRAINING



LESSON GUIDE NUMBER: MV-22 6156 B.04 (D-6 thru D-6.3)

ORGANIZATIONAL MAINTENANCE FOR FLIGHT CONTROL SURFACES

- A. LECTURE NUMBER:** MOS 6156 B.04 (D-6 thru D-6.3)
- B. TIME:** 1 HOUR
- C. DATE PREPARED:** 24 January 2000
- D. DATE REVIEWED:** On separate sheet
- E. TITLE OF LECTURE:** ORGANIZATIONAL MAINTENANCE FOR FLIGHT
CONTROL SURFACES
- F. OBJECTIVE:** The objective of this period of instruction is to introduce and familiarize all maintenance personnel with organizational maintenance for the flight control surfaces on the MV-22.
- G. INSTRUCTION AIDS:** A1-V22AB-OTIS-000
- H. REFERENCES:** IETM (S/S/S 5500/5700) Corrective Actions
- I. PRESENTATION:**
1. Present to the student(s) a presentation on organizational maintenance for the flight control surfaces on the MV-22.
 - a. R & R
 - (1) Flaperon
 - (2) Elevator
 - (3) Rudder
- J. SUMMARY:** During this period of instruction we have discussed organizational maintenance for the flight control surfaces on the MV-22.
- K. QUESTIONS AND ANSWERS:**

MV-22 MAINTENANCE TRAINING



LESSON GUIDE NUMBER: MV-22 6156 B.05 (A-1 thru A-8)

NO.3 UTILITY HYDRAULIC SYSTEM THEORY OF OPERATION

- A. LECTURE NUMBER:** MOS 6156 B.05 (A-1 thru A-8)
- B. TIME:** 1 HOUR
- C. DATE PREPARED:** 24 January 2000
- D. DATE REVIEWED:** On separate sheet
- E. TITLE OF LECTURE:** NO. 3 UTILITY HYDRAULIC SYSTEM THEORY OF OPEFATION
- F. OBJECTIVE:** The objective of this period of instruction is to introduce and familiarize all maintenance personnel with the theory of operation of the No. 3 utility hydraulic system on the MV-22.
- G. INSTRUCTION AIDS:** A1-V22AB-OTIS-000
- H. REFERENCE:** IETM (S/S/S 2921) Descriptive Information
- I. PRESENTATION:**
1. Present to the student(s) a presentation on the theory of operation for the No. 3 utility hydraulic system on the MV-22.
 - a. No. 3 Hydraulic System
 - b. Rotor Brake System
 - c. Rotor Positioning System (RPU)
 - d. Engine Air Particle Separator (EAPS)
 - e. Engine Start System
 - f. Cargo Winch
 - g. Rescue Hoist
 - h. Winch/Hoist Control Module
- J. SUMMARY:** During this period of instruction we have discussed the theory of operation for the No. 3 utility hydraulic system on the MV-22.
- K. QUESTIONS AND ANSWERS:**

MV-22 MAINTENANCE TRAINING



LESSON GUIDE NUMBER: MV-22 6156 B.05 (B-1 thru B-8)

NO.3 UTILITY HYDRAULIC SYSTEM FUNCTIONAL CHECK

- A. LECTURE NUMBER:** MOS 6156 B.05 (B-1 thru B-8)
- B. TIME:** 1 HOUR
- C. DATE PREPARED:** 24 January 2000
- D. DATE REVIEWED:** On separate sheet
- E. TITLE OF LECTURE:** NO. 3 UTILITY HYDRAULIC SYSTEM FUNCTIONAL CHECK
- F. OBJECTIVE:** The objective of this period of instruction is to introduce and familiarize all maintenance personnel with functional checks of the No. 3 utility hydraulic system on the MV-22.
- G. INSTRUCTION AIDS:** A1-V22AB-OTIS-000
- H. REFERENCES:** IETM (S/S/S 2921) Corrective Actions
- I. PRESENTATION:**
1. Present to the student(s) a presentation on functional checks of the No. 3 Utility Hydraulic System on the MV-22.
 - a. No. 3 Hydraulic System
 - b. Rotor Brake System
 - c. Rotor Positioning Unit (RPU)
 - d. Engine Air Particle Separator (EAPS)
 - e. Engine Start System
 - f. Cargo Winch
 - g. Rescue Hoist
 - h. Winch/Hoist Control Module
- J. SUMMARY:** During this period of instruction we have discussed functional checks of the No. 3 utility hydraulic system for the MV-22.
- K. QUESTIONS AND ANSWERS:**

MV-22 MAINTENANCE TRAINING



LESSON GUIDE NUMBER: MV-22 6156 B.05 (C-1 thru C-8)

NO.3 UTILITY HYDRAULIC SYSTEM FAULT ISOLATION

- A. LECTURE NUMBER:** MOS 6156 B.05 (C-1 thru C-8)
- B. TIME:** 1 HOUR
- C. DATE PREPARED:** 24 January 2000
- D. DATE REVIEWED:** On separate sheet
- E. TITLE OF LECTURE:** NO. 3 UTILITY HYDRAULIC SYSTEM FAULT ISOLATION
- F. OBJECTIVE:** The objective of this period of instruction is to introduce and familiarize all maintenance personnel with fault isolation of the No. 3 utility hydraulic system of the MV-22.
- G. INSTRUCTION AIDS:** A1-V22AB-OTIS-000
- H. REFERENCES:** IETM (S/S/S 2921) Troubleshooting
- I. PRESENTATION:**
1. Present to the student(s) a presentation on fault isolation of the No. 3 utility hydraulic system on the MV-22.
 - a. No. 3 Hydraulic System
 - b. Rotor Brake System
 - c. Rotor Positioning Unit (RPU)
 - d. Engine Air Particle Separator (EAPS)
 - e. Engine Start System
 - f. Cargo Winch
 - g. Rescue Hoist
 - h. Winch/Hoist Control Module
- J. SUMMARY:** During this period of instruction we have discussed fault isolation of the No. 3 utility hydraulic system on the MV-22.
- K. QUESTIONS AND ANSWERS:**

MV-22 MAINTENANCE TRAINING



LESSON GUIDE NUMBER: MV-22 6156 B.05 (D-1 thru D-1.18)

ORGANIZATIONAL MAINTENANCE FOR THE NO.3 UTILITY HYDRAULIC SYSTEM

- A. LECTURE NUMBER:** MOS 6156 B.05 (D-1 thru D-1.18)
- B. TIME:** 1 HOUR
- C. DATE PREPARED:** 24 January 2000
- D. DATE REVIEWED:** On separate sheet
- E. TITLE OF LECTURE:** ORGANIZATIONAL MAINTENANCE FOR THE NO.3
UTILITY HYDRAULIC SYSTEM
- F. OBJECTIVE:** The objective of this period of instruction is to introduce and familiarize all maintenance personnel with the organizational maintenance for the No. 3 utility hydraulic system on the MV-22.
- G. INSTRUCTION AIDS:** A1-V22AB-OTIS-000
- H. REFERENCES:** IETM (S/S/S 2921) Corrective actions
- I. PRESENTATION:**
1. Present to the student(s) a presentation on organizational maintenance for the No.3 utility hydraulic system on the MV-22.
 - a. Connect, Apply and Disconnect Hydraulic Power
 - b. Inspect Hydraulic System Reservoir Levels
 - c. Perform Hydraulic Fluid Sample
 - d. Service Utility Hydraulic Accumulator
 - e. Service Hydraulic System Reservoir
 - f. Remove and Replace Rosan Fittings
 - g. Hydraulic Repair, Tubes and Fittings
 - h. Depressurize No.3 Hydraulic System
 - i. Bleed No. 3
 - (1) Hydraulic System
 - (2) System Pump and Plumbing

(3) Module and Plumbing

j. Leak Check No. 3 Hydraulic System

k. R & R

(1) Hydraulic Pump

(2) Flight Control Module

(3) Return Filter Bowl / Element

(4) Pressure Filter Bowl / Element

(5) Accumulator Assembly

(6) Utility Isolation Valve

J. SUMMARY: During this period of instruction we have discussed organizational maintenance for the No. 3 utility hydraulic system on the MV-22.

K. QUESTIONS AND ANSWERS:

MV-22 MAINTENANCE TRAINING



LESSON GUIDE NUMBER: MV-22 6156 B.05 (D-2 thru D-2.4)

ORGANIZATIONAL MAINTENANCE FOR THE ROTOR BRAKE SYSTEM

A. LECTURE NUMBER: MOS 6156 B.05 (D-2 thru D-2.4)

B. TIME: 1 HOUR

C. DATE PREPARED: 24 January 2000

D. DATE REVIEWED: On separate sheet

E. TITLE OF LECTURE: ORGANIZATIONAL MAINTENANCE FOR THE ROTOR BRAKE SYSTEM

F. OBJECTIVE: The objective of this period of instruction is to introduce and familiarize all maintenance personnel with organizational maintenance for the rotor brake system on the MV-22.

G. INSTRUCTION AIDS: A1-V22AB-OTIS-000

H. REFERENCES: IETM (S/S/S 6325) Corrective Actions

I. PRESENTATION:

1. Present to the student(s) a presentation on organizational maintenance for the rotor brake system on the MV-22.
 - a. Bleed Rotor Brake Assembly
 - b. R & R
 - (1) Rotor Brake Assembly
 - (2) Rotor Brake Control Valve
 - c. Inspect Rotor Brake Wear Pin Indicator

J. SUMMARY: During this period of instruction we have discussed organizational maintenance for the rotor brake system on the MV-22.

K. QUESTIONS AND ANSWERS:

MV-22 MAINTENANCE TRAINING



LESSON GUIDE NUMBER: MV-22 6156 B.05 (D-3 thru D-3.2)

ORGANIZATIONAL MAINTENANCE FOR THE ROTOR POSITIONING UNIT

- A. LECTURE NUMBER:** MOS 6156 B.05 (D-3 thru D-3.2)
- B. TIME:** 1 HOUR
- C. DATE PREPARED:** 24 January 2000
- D. DATE REVIEWED:** On separate sheet
- E. TITLE OF LECTURE:** ORGANIZATIONAL MAINTENANCE FOR THE ROTOR POSITIONING UNIT (RPU)
- F. OBJECTIVE:** The objective of this period of instruction is to introduce and familiarize all maintenance personnel with organizational maintenance for the rotor-positioning unit on the MV-22.
- G. INSTRUCTION AIDS:** A1-V22AB-OTIS-000
- H. REFERENCES:** IETM (S/S/S 6610) Corrective Actions
- I. PRESENTATION:**
1. Present to the student(s) a presentation on organizational maintenance for the rotor-positioning unit on the MV-22.
 - a. Perform Functional Check RPU
 - b. R & R RPU Assembly
- J. SUMMARY:** During this period of instruction we have discussed organizational maintenance for the rotor-positioning unit on the MV-22.
- K. QUESTIONS AND ANSWERS:**

MV-22 MAINTENANCE TRAINING



LESSON GUIDE NUMBER: MV-22 6156 B.05 (D-4 thru D-4.5)

ORGANIZATIONAL MAINTENANCE FOR THE ENGINE AIR PARTICLE SEPARATOR

- A. LECTURE NUMBER:** MOS 6156 B.05 (D-4 thru D-4.5)
- B. TIME:** 1 HOUR
- C. DATE PREPARED:** 24 January 2000
- D. DATE REVIEWED:** On separate sheet
- E. TITLE OF LECTURE:** ORGANIZATIONAL MAINTENANCE FOR THE ENGINE
AIR PARTICLE SEPARATOR (EAPS)
- F. OBJECTIVE:** The objective of this period of instruction is to introduce and familiarize all maintenance personnel with organizational maintenance for the engine air particle separator on the MV-22.
- G. INSTRUCTION AIDS:** A1-V22AB-OTIS-000
- H. REFERENCES:** IETM (S/S/S 7181) Corrective Actions
- I. PRESENTATION:**
1. Present to the student(s) a presentation on organizational maintenance for the engine air particle separator on the MV-22.
 - a. Inspect EAPS
 - b. Test EAPS System
 - c. R & R
 - (1) Outboard EAPS Blower
 - (2) Inboard EAPS Blower
 - (3) EAPS Start Control Valve
- J. SUMMARY:** During this period of instruction we have discussed organizational maintenance for the engine air particle separator on the MV-22.
- K. QUESTIONS AND ANSWERS:**

MV-22 MAINTENANCE TRAINING



LESSON GUIDE NUMBER: MV-22 6156 B.05 (D-5 thru D-5.3)

ORGANIZATIONAL MAINTENANCE FOR THE ENGINE START SYSTEM

- A. LECTURE NUMBER:** MOS 6156 B.05 (D-5 thru D-5.3)
- B. TIME:** 1 HOUR
- C. DATE PREPARED:** 24 January 2000
- D. DATE REVIEWED:** On separate sheet
- E. TITLE OF LECTURE:** ORGANIZATIONAL MAINTENANCE FOR THE ENGINE START SYSTEM
- F. OBJECTIVE:** The objective of this period of instruction is to introduce and familiarize all maintenance personnel with organizational maintenance for the engine start system on the MV-22.
- G. INSTRUCTION AIDS:** A1-V22AB-OTIS-000
- H. REFERENCE:** IETM (S/S/S 8012) Corrective Actions
- I. PRESENTATION:**
1. Present to the student(s) a presentation on organizational maintenance for the engine start system on the MV-22.
 - a. Inspect Starter Assembly
 - b. R & R Starter Assembly
- J. SUMMARY:** During this period of instruction we have discussed organizational maintenance for the engine start system on the MV-22.
- K. QUESTIONS AND ANSWERS:**

MV-22 MAINTENANCE TRAINING



LESSON GUIDE NUMBER: MV-22 6156 B.06 (A-1 thru A-5)

LANDING GEAR/WHEEL BRAKE SYSTEM THEORY OF OPERATION

- A. LECTURE NUMBER:** MOS 6156 B.06 (A-1 thru A-5)
- B. TIME:** 1 HOUR
- C. DATE PREPARED:** 24 January 2000
- D. DATE REVIEWED:** On separate sheet
- E. TITLE OF LECTURE:** LANDING GEAR/WHEEL BRAKE SYSTEM THEORY OF OPERATION
- F. OBJECTIVE:** The objective of this period of instruction is to introduce and familiarize all maintenance personnel with the theory of operation of the landing gear/wheel brake system on the MV-22.
- G. INSTRUCTION AIDS:** A1-V22AB-OTIS-000
- H. REFERENCES:** IETM (S/S/S 3200) Descriptive Info
- I. PRESENTATION:**
1. Present to the student(s) a presentation on the theory of operation of the landing gear/wheel brake system on the MV-22.
 - a. Landing Gear System
 - b. Landing Gear Emergency Extension System
 - c. Wheel Brake System
 - d. Nose Wheel Steering System
 - e. Aircraft Jacking
- J. SUMMARY:** During this period of instruction we have discussed the theory of operation of the landing gear/wheel brake system on the MV-22.
- K. QUESTIONS AND ANSWERS:**

MV-22 MAINTENANCE TRAINING



LESSON GUIDE NUMBER: MV-22 6156 B.06 (B-1 thru B-5)

LANDING GEAR/WHEEL BRAKE SYSTEM FUNCTIONAL CHECK

- A. LECTURE NUMBER:** MOS 6156 B.06 (B-1 thru B-5)
- B. TIME:** 1 HOUR
- C. DATE PREPARED:** 24 January 2000
- D. DATE REVIEWED:** On separate sheet
- E. TITLE OF LECTURE:** LANDING GEAR/WHEEL BRAKE SYSTEM FUNCTIONAL CHECK
- F. OBJECTIVE:** The objective of this period of instruction is to introduce and familiarize all maintenance personnel with the functional checks of the landing gear/wheel brake system on the MV-22.
- G. INSTRUCTION AIDS:** A1-V22AB-OTIS-000
- H. REFERENCES:** IETM (S/S/S 3200) Corrective Actions
- I. PRESENTATION:**
1. Present to the student(s) a presentation on the functional checks of the landing gear/wheel brake system on the MV-22.
 - a. Landing Gear System
 - b. Landing Gear Emergency Extension System
 - c. Wheel Brake System
 - d. Nose Wheel Steering System
 - e. Pneumatic Reservoir
- J. SUMMARY:** During this period of instruction we have discussed the functional checks for the landing gear/wheel brake system on the MV-22.
- K. QUESTIONS AND ANSWERS:**

MV-22 MAINTENANCE TRAINING



LESSON GUIDE NUMBER: MV-22 6156 B.06 (C-1 thru C-4)

LANDING GEAR/WHEEL BRAKE SYSTEM FAULT ISOLATION

- A. LECTURE NUMBER:** MOS 6156 B.06 (C-1 thru C-4)
- B. TIME:** 1 HOUR
- C. DATE PREPARED:** 24 January 2000
- D. DATE REVIEWED:** On separate sheet
- E. TITLE OF LECTURE:** LANDING GEAR/WHEEL BRAKE SYSTEM FAULT ISOLATION
- F. OBJECTIVE:** The objective of this period of instruction is to introduce and familiarize all maintenance personnel with fault isolation of the landing gear/wheel brake system on the MV-22.
- G. INSTRUCTION AIDS:** A1-V22AB-OTIS-000
- H. REFERENCES:** IETM (S/S/S 3200) Troubleshooting
- I. PRESENTATION:**
1. Present to the student(s) a presentation on the fault isolation of the landing gear/wheel brake system on the MV-22.
 - a. Landing Gear System
 - b. Landing Gear Emergency Extension System
 - c. Wheel Brake System
 - d. Nose Wheel Steering System
- J. SUMMARY:** During this period of instruction we have discussed the fault isolation of the landing gear/wheel brake system on the MV-22.
- K. QUESTIONS AND ANSWERS:**

MV-22 MAINTENANCE TRAINING



LESSON GUIDE NUMBER: MV-22 6156 B.06 (D-1 thru D-1.15)

ORGANIZATIONAL MAINTENANCE FOR THE MAIN LANDING GEAR SYSTEM

- A. LECTURE NUMBER:** MOS 6156 B.06 (D-1 thru D-1.15)
- B. TIME:** 1 HOUR
- C. DATE PREPARED:** 24 January 2000
- D. DATE REVIEWED:** On separate sheet
- E. TITLE OF LECTURE:** ORGANIZATIONAL MAINTENANCE FOR THE MAIN LANDING GEAR (MLG) SYSTEM
- F. OBJECTIVE:** The objective of this period of instruction is to introduce and familiarize all maintenance personnel with organizational maintenance for the main landing gear system on the MV-22.
- G. INSTRUCTION AIDS:** A1-V22AB-OTIS-000
- H. REFERENCES:** IETM (S/S/S 3210) Corrective Actions
- I. PRESENTATION:**
1. Present to the student(s) a presentation on organizational maintenance for the main landing gear system on the MV-22.
 - a. Inspect Main Landing Gear
 - b. Service MLG Shock Strut
 - c. Service Pneumatic Reservoir
 - d. Service Tires
 - e. MLG Strut Bleed/Fill on ACFT
 - f. MLG Strut Bleed/Fill on HDLG Adaptor
 - g. Adjust MLG Aft Door
 - h. Adjust MLG Forward Door
 - i. R & R
 - (1) MLG Shock Strut
 - (2) MLG Drag Strut Actuator

- (3) Landing Gear Control Valve
- (4) MLG Wheel/Tire Assembly Outboard
- (5) MLG Wheel/Tire Assembly Inboard

j. Inspect Tires, Damage/Cut/Inflation

k. Grease Pack MLG Wheel Bearings

J. SUMMARY: During this period of instruction we have discussed organizational maintenance for the main landing gear system on the MV-22.

K. QUESTIONS AND ANSWERS:

MV-22 MAINTENANCE TRAINING



LESSON GUIDE NUMBER: MV-22 6156 B.06 (D-2 thru D-2.9)

ORGANIZATIONAL MAINTENANCE FOR THE NOSE LANDING GEAR SYSTEM

- A. LECTURE NUMBER:** MOS 6156 B.06 (D-2 thru D-2.9)
- B. TIME:** 1 HOUR
- C. DATE PREPARED:** 24 January 2000
- D. DATE REVIEWED:** On separate sheet
- E. TITLE OF LECTURE:** ORGANIZATIONAL MAINTENANCE FOR THE
NOSE LANDING GEAR (NLG) SYSTEM
- F. OBJECTIVE:** The objective of this period of instruction
is to introduce and familiarize all
maintenance personnel with organizational
maintenance for the nose landing gear system
on the MV-22.
- G. INSTRUCTION AIDS:** A1-V22AB-OTIS-000
- H. REFERENCES:** IETM (S/S/S 3220) Corrective Actions
- I. PRESENTATION:**
1. Present to the student(s) a presentation on
organizational maintenance for the nose landing gear
system on the MV-22.
 - a. Inspect NLG
 - b. Bleed/Fill Nose Shock Strut
 - c. Service Tires
 - d. Service Nose Shock Strut
 - e. R & R
 - (1) NLG Shock Strut
 - (2) Drag Strut Actuator
 - (3) Left Hand NLG Wheel/Tire Assembly
 - (4) Right Hand NLG Wheel/Tire Assembly
 - f. Inspect Tires; Damage/Cut/Inflation

J. SUMMARY: During this period of instruction we have discussed organizational maintenance for the nose landing gear system on the MV-22.

K. QUESTIONS AND ANSWERS:

MV-22 MAINTENANCE TRAINING



LESSON GUIDE NUMBER: MV-22 6156 B.06 (D -3 thru D-3.7)

ORGANIZATIONAL MAINTENANCE FOR THE WHEEL BRAKE SYSTEM

- A. LECTURE NUMBER:** MOS 6156 B.06 (D-3 thru D-3.7)
- B. TIME:** 1 HOUR
- C. DATE PREPARED:** 24 January 2000
- D. DATE REVIEWED:** On separate sheet
- E. TITLE OF LECTURE:** ORGANIZATIONAL MAINTENANCE FOR THE
WHEEL BRAKE SYSTEM
- F. OBJECTIVE:** The objective of this period of instruction
is to introduce and familiarize all
maintenance personnel with organizational
maintenance for the wheel brake system on
the MV-22.
- G. INSTRUCTION AIDS:** A1-V22AB-OTIS-000
- H. REFERENCES:** IETM (S/S/S 3240) Corrective Actions
- I. PRESENTATION:**
1. Present to the student(s) a presentation on
organizational maintenance for the wheel brake system
on the MV-22.
 - a. R & R
 - (1) Brake Master Cylinder Assembly Outboard
 - (2) Brake Master Cylinder Assembly Inboard
 - (3) Main Landing Gear Brake Assembly
 - b. Bleed Aircraft Brake System
 - c. Leak Check Wheel Brake System
 - d. Inspect Brake Pads
- J. SUMMARY:** During this period of instruction we have
discussed organizational maintenance of the
wheel brake system on the MV-22.
- K. QUESTIONS AND ANSWERS:**

MV-22 MAINTENANCE TRAINING



LESSON GUIDE NUMBER: MV-22 6156 B.06 (D-4 thru D-4.1)

ORGANIZATIONAL MAINTENANCE FOR THE NOSE WHEEL STEERING

- A. LECTURE NUMBER:** MOS 6156 B.06 (D-4 thru D-4.1)
- B. TIME:** 1 HOUR
- C. DATE PREPARED:** 24 January 2000
- D. DATE REVIEWED:** On separate sheet
- E. TITLE OF LECTURE:** ORGANIZATIONAL MAINTENANCE FOR THE NOSE
WHEEL STEERING SYSTEM
- F. OBJECTIVE:** The objective of this period of instruction is to introduce and familiarize all maintenance personnel with organizational maintenance for the nose wheel steering system on the MV-22.
- G. INSTRUCTION AIDS:** A1-V22AB-OTIS-000
- H. REFERENCES:** IETM (S/S/S 3250) Corrective Actions
- I. PRESENTATION:**
1. Present to the student(s) a presentation on organizational maintenance for the nose wheel steering system on the MV-22.
 - a. R & R Nose Wheel Steering Unit
- J. SUMMARY:** During this period of instruction we have discussed organizational maintenance of the nose wheel steering system on the MV-22.
- K. QUESTIONS AND ANSWERS:**

MV-22 MAINTENANCE TRAINING



LESSON GUIDE NUMBER: MV-22 6156 B.06 (D-5 thru D-5.4)

ORGANIZATIONAL MAINTENANCE FOR AIRCRAFT JACKING

- A. LECTURE NUMBER:** MOS 6156 B.06 (D-5 thru D-5.4)
- B. TIME:** 1 HOUR
- C. DATE PREPARED:** 24 January 2000
- D. DATE REVIEWED:** On separate sheet
- E. TITLE OF LECTURE:** ORGANIZATIONAL MAINTENANCE FOR AIRCRAFT JACKING
- F. OBJECTIVE:** The objective of this period of instruction is to introduce and familiarize all maintenance personnel with aircraft jacking for the MV-22.
- G. INSTRUCTION AIDS:** A1-V22AB-OTIS-000
- H. REFERENCES:** IETM (S/S/S 0710) Corrective Actions
- I. PRESENTATION:**
1. Present to the student(s) a presentation on aircraft jacking for the MV-22.
 - a. Jack Axle, Ashore
 - b. Jack Axle, Afloat
 - c. Jack Aircraft, Ashore
 - d. Jack Aircraft, Afloat
- J. SUMMARY:** During this period of instruction we have discussed aircraft jacking for the MV-22.
- K. QUESTIONS AND ANSWERS:**

MV-22 MAINTENANCE TRAINING



LESSON GUIDE NUMBER: MV-22 6156 B.07 (A-1)

BLADE FOLD WING STOW (BFWS) SYSTEM THEORY OF OPERATION

- A. LECTURE NUMBER:** MOS 6156 B.07 (A-1)
- B. TIME:** 1 HOUR
- C. DATE PREPARED:** 24 January 2000
- D. DATE REVIEWED:** On separate sheet
- E. TITLE OF LECTURE:** BLADE FOLD WING STOW (BFWS) THEORY OF OPERATION
- F. OBJECTIVE:** The objective of this period of instruction is to introduce and familiarize all maintenance personnel with the theory of operation for the blade fold wing stow system on the MV-22.
- G. INSTRUCTION AIDS:** A1-V22AB-OTIS-000
- H. REFERENCES:** IETM (S/S/S 6600) Descriptive Info
- I. PRESENTATION:**
1. Present to the student(s) a presentation on the theory of operation of the blade fold wing stow system on the MV-22.
 - a. BFWS System
- J. SUMMARY:** During this period of instruction we have discussed the theory of operation of the blade fold wig stow system on the MV-22.
- K. QUESTIONS AND ANSWERS:**

MV-22 MAINTENANCE TRAINING



LESSON GUIDE NUMBER: MV-22 6156 B.07 (B-1)

BLADE FOLD WING STOW (BFWS) SYSTEM FUNCTIONAL CHECKS

- A. LECTURE NUMBER:** MOS 6156 B.07 (B-1)
- B. TIME:** 1 HOUR
- C. DATE PREPARED:** 24 January 2000
- D. DATE REVIEWED:** On separate sheet
- E. TITLE OF LECTURE:** BLADE FOLD WING STOW (BFWS) SYSTEM
FUNCTIONAL CHECKS
- F. OBJECTIVE:** The objective of this period of instruction is to introduce and familiarize all maintenance personnel with functional checks of the blade fold wing stow system on the MV-22.
- G. INSTRUCTION AIDS:** A1-V22AB-OTIS-000
- H. REFERENCES:** IETM (S/S/S 6600) Corrective Actions
- I. PRESENTATION:**
1. Present to the student(s) a presentation on functional checks of the blade fold wing stow system on the MV-22.
 - a. BFWS System
- J. SUMMARY:** During this period of instruction we have discussed the functional checks for the blade fold wing stow system on the MV-22.
- K. QUESTIONS AND ANSWERS:**

MV-22 MAINTENANCE TRAINING



LESSON GUIDE NUMBER: MV-22 6156 B.07 (C-1)

BLADE FOLD WING STOW SYSTEM FAULT ISOLATION

- A. LECTURE NUMBER:** MOS 6156 B.07 (C-1)
- B. TIME:** 1 HOUR
- C. DATE PREPARED:** 24 January 2000
- D. DATE REVIEWED:** On separate sheet
- E. TITLE OF LECTURE:** BLADE FOLD WING STOW (BFWS) SYSTEM FAULT ISOLATION.
- F. OBJECTIVE:** The objective of this period of instruction is to introduce and familiarize all maintenance personnel with fault isolation of the blade fold wing stow system on the MV-22.
- G. INSTRUCTION AIDS:** A1-V22AB-OTIS-000
- H. REFERENCES:** IETM (S/S/S 6600) Troubleshooting
- I. PRESENTATION:**
1. Present to the student(s) a presentation on fault isolation of the blade fold wing stow system on the MV-22.
 - a. BFWS System
- J. SUMMARY:** During this period of instruction we have discussed the fault isolation of the blade fold wing stow system on the MV-22.
- K. QUESTIONS AND ANSWERS:**

MV-22 MAINTENANCE TRAINING



LESSON GUIDE NUMBER: MV-22 6156 B.07 (D-1 thru D-1.12)

ORGANIZATIONAL MAINTENANCE FOR THE BLADE FOLD WING STOW SYSTEM

- A. LECTURE NUMBER:** MOS 6156 B.07 (D-1 thru D-1.12)
- B. TIME:** 1 HOUR
- C. DATE PREPARED:** 24 January 2000
- D. DATE REVIEWED:** On separate sheet
- E. TITLE OF LECTURE:** ORGANIZATIONAL MAINTENANCE FOR THE BLADE FOLD WING STOW SYSTEM (BFWS)
- F. OBJECTIVE:** The objective of this period of instruction is to introduce and familiarize all maintenance personnel with organizational maintenance for the blade fold wing stow system on the MV-22.
- G. INSTRUCTION AIDS:** A1-V22AB-OTIS-000
- H. REFERENCE:** IETM (S/S/S 6600) Corrective Actions
- I. PRESENTATION:**
1. Present to the student(s) a presentation on organizational maintenance for the blade fold wing stow system on the MV-22.
 - a. BFWS System
 - b. R & R
 - (1) Safety Flag Assembly
 - (2) Capstan Drive Assembly
 - (3) Manual Drive Unit
 - (4) Hydraulic Motor Assembly
 - (5) Wing Stow Isolation Valve MDL
 - (6) Lock Pin Assembly (left fwd)
 - (7) Lock Pin Assembly (right fwd)
 - (8) Lock Pin Assembly (left aft)
 - (9) Lock Pin Assembly (right aft)

(10) Lock Pin Control Module

c. Replace Extended Shaft Assembly

(1) Left FWD

(2) Right FWD

(3) Left AFT

(4) Right AFT

J. SUMMARY: During this period of instruction we have discussed organizational maintenance for the blade fold wing stow system on the MV-22.

K. QUESTIONS AND ANSWERS:

MV-22 MAINTENANCE TRAINING



LESSON GUIDE NUMBER: MV-22 6156 B.08 (A-1 thru A-2)

N0.1 AND N0.2 HYDRAULIC SYSTEMS THEORY OF OPERATION

- A. LECTURE NUMBER:** MOS 6156 B.08 (A-1 thru A-2)
- B. TIME:** 1 HOUR
- C. DATE PREPARED:** 24 January 2000
- D. DATE REVIEWED:** On separate sheet
- E. TITLE OF LECTURE:** NO. 1 AND NO. 2 HYDRAULIC SYSTEMS THEORY OF OPERATION
- F. OBJECTIVE:** The objective of this period of instruction is to introduce and familiarize all maintenance personnel with the theory of operation for the No. 1 and No. 2 hydraulic systems.
- G. INSTRUCTION AIDS:** A1-V22AB-OTIS-000
- H. REFERENCE:** IETM (S/S/S 2911/2912) Descriptive Info
- I. PRESENTATION:**
1. Present to the student(s) a presentation on the theory of operation of the No. 1 and No. 2 hydraulic systems on the MV-22.
 - a. No. 1 Hydraulic System
 - b. No. 2 Hydraulic System
- J. SUMMARY:** During this period of instruction we have discussed the theory of operation for the No. 1 and No. 2 hydraulic systems on the MV-22.
- K. QUESTIONS AND ANSWERS:**

MV-22 MAINTENANCE TRAINING



LESSON GUIDE NUMBER: MV-22 6156 B.08 (B-1 thru B-2)

NO.1 AND NO.2 HYDRAULIC SYSTEM FUNCTIONAL CHECKS

- A. LECTURE NUMBER:** MOS 6156 B.08 (B-1 thru B-2)
- B. TIME:** 1 HOUR
- C. DATE PREPARED:** 24 January 2000
- D. DATE REVIEWED:** On separate sheet
- E. TITLE OF LECTURE:** NO. 1 AND NO. 2 HYDRAULIC SYSTEMS
FUNCTIONAL CHECKS
- F. OBJECTIVE:** The objective of this period of instruction is to introduce and familiarize all maintenance personnel with functional checks of the No. 1 and No. 2 hydraulic systems on the MV-22.
- G. INSTRUCTION AIDS:** A1-V22AB-OTIS-000
- H. REFERENCE:** IETM (S/S/S 2911/2912) Corrective Actions
- I. PRESENTATION:**
1. Present to the student(s) a presentation on functional checks of the No. 1 and No. 2 hydraulic systems on the MV-22.
 - a. No. 1 Hydraulic System
 - b. No. 2 Hydraulic System
- J. SUMMARY:** During this period of instruction we have discussed functional checks for the No. 1 and No. 2 hydraulic systems on the MV-22.
- K. QUESTIONS AND ANSWERS:**

MV-22 MAINTENANCE TRAINING



LESSON GUIDE NUMBER: MV-22 6156 B.08 (C-1 thru C-2)

NO.1 AND NO.2 HYDRAULIC SYSTEMS FAULT ISOLATION

- A. LECTURE NUMBER:** MOS 6156 B.08 (C-1 thru C-2)
- B. TIME:** 1 HOUR
- C. DATE PREPARED:** 24 January 2000
- D. DATE REVIEWED:** On separate sheet
- E. TITLE OF LECTURE:** NO. 1 AND NO. 2 HYDRAULIC SYSTEMS FAULT ISOLATION
- F. OBJECTIVE:** The objective of this period of instruction is to introduce and familiarize all maintenance personnel with fault isolation of the No. 1 and No. 2 hydraulic systems on the MV-22.
- G. INSTRUCTION AIDS:** A1-V22AB-OTIS-000
- H. REFERENCE:** IETM (S/S/S 2911/2912) Descriptive Info
- I. PRESENTATION:**
1. Present to the student(s) a presentation on fault isolation of the No. 1 and No. 2 hydraulic systems on the MV-22.
 - a. Fault Locate No. 1 Hydraulic System
 - b. Fault Locate No. 2 Hydraulic System
- J. SUMMARY:** During this period of instruction we have discussed fault isolation of the No. 1 and No. 2 hydraulic systems on the MV-22.
- K. QUESTIONS AND ANSWERS:**

MV-22 MAINTENANCE TRAINING



LESSON GUIDE NUMBER: MV-22 6156 B.08 (D-1 thru D-1.28)

ORGANIZATIONAL MAINTENANCE FOR THE NO.1 HYDRAULIC SYSTEM

- A. LECTURE NUMBER:** MOS 6156 B.08 (D-1 thru D-1.28)
- B. TIME:** 1 HOUR
- C. DATE PREPARED:** 24 January 2000
- D. DATE REVIEWED:** On separate sheet
- E. TITLE OF LECTURE:** ORGANIZATIONAL MAINTENANCE FOR THE NO. 1
HYDRAULIC SYSTEM
- F. OBJECTIVE:** The objective of this period of instruction is to introduce and familiarize all maintenance personnel with organizational maintenance for the No. 1 hydraulic system on the MV-22.
- G. INSTRUCTION AIDS:** A1-V22AB-OTIS-000
- H. REFERENCE:** IETM (S/S/S 2911) Corrective Actions
- I. PRESENTATION:**
1. Present to the student(s) a presentation on organizational maintenance for the No. 1 hydraulic system on the MV-22.
 - a. No. 1 Hydraulic System
 - b. Connect/Disconnect/Apply Hydraulic Power
 - c. Inspect Reservoir Fluid Levels
 - d. Perform Hydraulic Fluid Sampling
 - e. Service Flight Control Hydraulic Accumulator
 - f. Service Hydraulic Reservoir
 - g. R & R Rosan Fittings
 - h. Hydraulic Repair, Tubes and Fittings
 - i. Hydraulic System Test
 - j. Depressurize Hydraulic System

k. Bleed

- (1) Hydraulic System
- (2) System Pump and Plumbing
- (3) Module and Plumbing

l. Leak Check System

m. Replace Ground Test Conn

- (1) Pressure
- (2) Return

n. R & R

- (1) PC1 Return Swivel
- (2) PC1 Pressure Swivel
- (3) Fluid Compensation Valve
- (4) Hydraulic PC1 Manifold
- (5) Hydraulic Pump
- (6) Flight Control Module
- (7) Return Filter Bowl/Element
- (8) Pressure Filter Bowl/Element
- (9) Accumulator
- (10) Pressure Gauge
- (11) SW Isolation Valve Module

J. SUMMARY: During this period of instruction we have discussed organizational maintenance for the No. 1 hydraulic system on the MV-22.

K. QUESTIONS AND ANSWERS:

MV-22 MAINTENANCE TRAINING



LESSON GUIDE NUMBER: MV-22 6156 B.08 (D-2 thru D-2.28)

ORGANIZATIONAL MAINTENANCE FOR THE NO.2 HYDRAULIC SYSTEM

- A. LECTURE NUMBER:** MOS 6156 B.08 (D-2 thru D-2.28)
- B. TIME:** 1 HOUR
- C. DATE PREPARED:** 24 January 2000
- D. DATE REVIEWED:** On separate sheet
- E. TITLE OF LECTURE:** ORGANIZATIONAL MAINTENANCE FOR THE NO. 2
HYDRAULIC SYSTEM
- F. OBJECTIVE:** The objective of this period of instruction is to introduce and familiarize all maintenance personnel with organizational maintenance for the No. 2 hydraulic system on the MV-22.
- G. INSTRUCTION AIDS:** A1-V22AB-OTIS-000
- H. REFERENCE:** IETM (S/S/S 2912) Corrective Actions
- I. PRESENTATION:**
1. Present to the student(s) a presentation on organizational maintenance for the No. 2 hydraulic system on the MV-22.
 - a. No. 2 Hydraulic System
 - b. Connect/Disconnect/Apply Hydraulic Power
 - c. Inspect Hydraulic Reservoir Fluid Levels
 - d. Perform Hydraulic Fluid Sampling
 - e. Service Flight Control Hydraulic Accumulator
 - f. Service Hydraulic Reservoir
 - g. R & R Rosan Fittings
 - h. Hydraulic Repair, Tubes and Fittings
 - i. Hydraulic System Test
 - j. Depressurize Hydraulic System

k. Bleed

- (1) Hydraulic System
- (2) System Pump and Plumbing
- (3) Module and Plumbing

l. Leak Check System

m. Replace Ground Test Conn

- (1) Pressure
- (2) Return

n. R & R

- (1) PC2 Return Swivel
- (2) PC2 Pressure Swivel
- (3) Fluid Compensation Valve
- (4) Hydraulic PC2 Manifold
- (5) Hydraulic Pump
- (6) Flight Control Module
- (7) Return Filter Bowl/Element
- (8) Pressure Filter Bowl/Element
- (9) Accumulator
- (10) Pressure Gauge
- (11) Switching valve (Remote)
- (12) SW Isolation Valve Module

J. SUMMARY: During this period of instruction we have discussed organizational maintenance for the No. 2 hydraulic system on the MV-22.

K. QUESTIONS AND ANSWERS:

MV-22 MAINTENANCE TRAINING



LESSON GUIDE NUMBER: MV-22 6156 B.09 (A-1 thru A-2)

CARGO RAMP AND DOOR SYSTEMS THEORY OF OPERATION

- A. LECTURE NUMBER:** MOS 6156 B.09 (A-1 thru A-2)
- B. TIME:** 1 HOUR
- C. DATE PREPARED:** 24 January 2000
- D. DATE REVIEWED:** On separate sheet
- E. TITLE OF LECTURE:** CARGO RAMP AND DOOR SYSTEMS THEORY OF OPERATION.
- F. OBJECTIVE:** The objective of this period of instruction is to introduce and familiarize all maintenance personnel with the theory of operation for the cargo ramp and door systems on the MV-22.
- G. INSTRUCTION AIDS:** A1-V22AB-OTIS-000
- H. REFERENCE:** IETM (S/S/S 2925) Descriptive Info
- I. PRESENTATION:**
1. Present to the student(s) a presentation on the theory of operation of the cargo ramp and door systems on the MV-22.
 - a. Ramp
 - b. Ramp Door
- J. SUMMARY:** During this period of instruction we have discussed the theory of operation of the cargo ramp and door systems on the MV-22.
- K. QUESTIONS AND ANSWERS:**

MV-22 MAINTENANCE TRAINING



LESSON GUIDE NUMBER: MV-22 6156 B.09 (B-1)

CARGO RAMP AND DOOR SYSTEM FUNCTIONAL CHECK

- A. LECTURE NUMBER:** MOS 6156 B.09 (B-1)
- B. TIME:** 1 HOUR
- C. DATE PREPARED:** 24 January 2000
- D. DATE REVIEWED:** On separate sheet
- E. TITLE OF LECTURE:** CARGO RAMP AND DOOR SYSTEM FUNCTIONAL CHECK.
- F. OBJECTIVE:** The objective of this period of instruction is to introduce and familiarize all maintenance personnel with functional checks of the cargo ramp and door systems on the MV-22.
- G. INSTRUCTION AIDS:** A1-V22AB-OTIS-000
- H. REFERENCE:** IETM (S/S/S 2925) Corrective Actions
- I. PRESENTATION:**
1. Present to the student(s) a presentation on functional checks of the cargo ramp and door systems on the MV-22.
 - a. Ramp/Door Actuators
- J. SUMMARY:** During this period of instruction we have discussed functional checks for the cargo ramp and door systems on the MV-22.
- K. QUESTIONS AND ANSWERS:**

MV-22 MAINTENANCE TRAINING



LESSON GUIDE NUMBER: MV-22 6156 B.09 (C-1 thru C-2)

CARGO RAMP AND DOOR SYSTEM FAULT ISOLATION

A. LECTURE NUMBER: MOS 6156 B.09 (C-1 thru C-2)

B. TIME: 1 HOUR

C. DATE PREPARED: 24 January 2000

D. DATE REVIEWED: On separate sheet

E. TITLE OF LECTURE: CARGO RAMP AND DOOR SYSTEM FAULT ISOLATION

F. OBJECTIVE: The objective of this period of instruction is to introduce and familiarize all maintenance personnel with fault isolation of the cargo ramp and door systems on the MV-22.

G. INSTRUCTION AIDS: A1-V22AB-OTIS-000

H. REFERENCE: IETM (S/S/S 2925) Troubleshooting

I. PRESENTATION:

1. Present to the student(s) a presentation on fault isolation of the cargo ramp and door systems on the MV-22.
 - a. Ramp/Door Actuators

J. SUMMARY: During this period of instruction we have discussed fault isolation of the cargo ramp and door systems on the MV-22.

K. QUESTIONS AND ANSWERS:

MV-22 MAINTENANCE TRAINING



LESSON GUIDE NUMBER: MV-22 6156 B.09 (D-1 thru D-1.5)

ORGANIZATIONAL MAINTENANCE FOR THE CARGO RAMP SYSTEM

- A. LECTURE NUMBER:** MOS 6156 B.09 (D-1 thru D-1.5)
- B. TIME:** 1 HOURS
- C. DATE PREPARED:** 21 May 2002
- D. DATE REVIEWED:** On separate sheet
- E. TITLE OF LECTURE:** ORGANIZATIONAL MAINTENANCE FOR THE CARGO RAMP SYSTEM.
- F. OBJECTIVE:** The objective of this period of instruction is to introduce and familiarize all maintenance personnel with organizational maintenance for the cargo ramp system on the MV-22.
- G. INSTRUCTION AIDS:** A1-V22AB-OTIS-000
- H. REFERENCE:** IETM (S/S/S 2925) Corrective Actions
- I. PRESENTATION:**
1. Present to the student(s) a presentation on organizational maintenance for the cargo ramp system on the MV-22.
 - a. Ramp
 - b. Bleed Cargo Ramp Door System
 - c. Rig Ramp Actuator
 - d. R & R
 - (1) Ramp Actuator
 - (2) Ramp Control Valve
 - (3) Pump Hydraulic, Electric Drive Motor
- J. SUMMARY:** During this period of instruction we have discussed organizational maintenance for the cargo ramp system on the MV-22.
- K. QUESTIONS AND ANSWERS:**

MV-22 MAINTENANCE TRAINING



LESSON GUIDE NUMBER: MV-22 6156 B.09 (D-2 thru D-2.5)

ORGANIZATIONAL MAINTENANCE FOR THE CARGO RAMP DOOR SYSTEM

- A. LECTURE NUMBER:** MOS 6156 B.09 (D-2 thru D-2.5)
- B. TIME:** 1 HOUR
- C. DATE PREPARED:** 21 May 2002
- D. DATE REVIEWED:** On separate sheet
- E. TITLE OF LECTURE:** ORGANIZATIONAL MAINTENANCE FOR THE CARGO RAMP DOOR SYSTEM
- F. OBJECTIVE:** The objective of this instruction is to introduce and familiarize all maintenance personnel with organizational maintenance for the cargo ramp door system on the MV-22.
- G. INSTRUCTION AIDS:** A1-V22AB-OTIS-000
- H. REFERENCE:** IETM (S/S/S 2925) Corrective Actions
- I. PRESENTATION:**
1. Present to the student(s) a presentation on organizational maintenance for the cargo ramp door system on the MV-22.
 - a. Ramp Door
 - b. Bleed Cargo Ramp and Door System
 - c. R & R
 - (1) Door Latch Actuator
 - (2) Ramp Door Actuator / Slave
 - (3) Ramp Door Actuator / Master
 - (4) Pump Hydraulic, Electric Drive Motor
- J. SUMMARY:** During this period of instruction we have discussed organizational maintenance for the cargo ramp door system on the MV-22.
- K. QUESTIONS AND ANSWERS:**

MV-22 MAINTENANCE TRAINING



LESSON GUIDE NUMBER: MV-22 6156 B.10 (A-1 thru A-2)

AIRCRAFT COMPOSITE/STRUCTURAL COMPONENT REPAIRS THEORY OF OPERATION

A. LECTURE NUMBER: MOS 6156 B.10 (A-1 thru A-2)

B. TIME: 1 HOUR

C. DATE PREPARED: 24 January 2000

D. DATE REVIEWED: On separate sheet

E. TITLE OF LECTURE: AIRCRAFT COMPOSITE/STRUCTURAL COMPONENT
REPAIRS THEORY OF OPERATION

F. OBJECTIVE: The objective of this period of instruction is to introduce and familiarize all maintenance personnel with the theory of operation of aircraft composite/structural component repairs on the MV-22.

G. INSTRUCTION AIDS: A1-V22AB-OTIS-000

H. REFERENCE: IETM (S/S/S 5100) Descriptive Info

I. PRESENTATION:

1. Present to the student(s) a presentation on the theory of operation of aircraft composite/structural component repairs on the MV-22.
 - a. Composite Repair Structures/Structural Components
 - b. Structural Repair Components

J. SUMMARY: During this period of instruction we have discussed the theory of operation of aircraft composite/structural component repairs on the MV-22.

K. QUESTIONS AND ANSWERS:

MV-22 MAINTENANCE TRAINING



LESSON GUIDE NUMBER: MV-22 6156 B.10 (B-1)

AIRCRAFT COMPOSITE/STRUCTURAL COMPONENT REPAIR FUNCTIONAL CHECKS

- A. LECTURE NUMBER:** MOS 6156 B.10 (B-1)
- B. TIME:** 1 HOUR
- C. DATE PREPARED:** 24 January 2000
- D. DATE REVIEWED:** On Separate Sheet
- E. TITLE OF LECTURE:** AIRCRAFT COMPOSITE/STRUCTURAL REPAIR
FUNCTIONAL CHECKS
- F. OBJECTIVE:** The objective of this period of instruction is to introduce and familiarize all maintenance personnel with how to perform functional checks on aircraft composite/structural component repairs on the MV-22.
- G. INSTRUCTION AIDS:** A1-V22AB-OTIS-000
- H. REFERENCE:** IETM (S/S/S 5100) Corrective Action
- I. PRESENTATION:**
1. Present to the student(s) a presentation on how to perform functional checks on aircraft composite/structural component repairs on the MV-22.
 - a. Perform Composite/Structural Component Assessment for Failure
- J. SUMMARY:** During this period of instruction we have discussed how to perform functional checks on aircraft composite/structural component repairs on the MV-22.
- K. QUESTIONS AND ANSWERS:**

MV-22 MAINTENANCE TRAINING



LESSON GUIDE NUMBER: MV-22 6156 B.10 (C-1)

AIRCRAFT COMPOSITE/STRUCTURAL COMPONENT REPAIR FAULT ISOLATION

- A. LECTURE NUMBER:** MOS 6156 B.10 (C-1)
- B. TIME:** 1 HOUR
- C. DATE PREPARED:** 24 January 2000
- D. DATE REVIEWED:** On Separate Sheet
- E. TITLE OF LECTURE:** AIRCRAFT COMPOSITE/STRUCTURAL REPAIR FAULT ISOLATION
- F. OBJECTIVE:** The objective of this period of instruction is to introduce and familiarize all maintenance personnel with fault isolation of composite/structural component damage on the MV-22.
- G. INSTRUCTION AIDS:** A1-V22AB-OTIS-000
- H. REFERENCE:** IETM (S/S/S 5100) Troubleshooting
- I. PRESENTATION:**
1. Present to the student(s) a presentation on fault isolation of composite/structural component repairs on the MV-22.
 - a. Perform Fault Isolation on Composite/Structural Components on the MV-22.
- J. SUMMARY:** During this period of instruction we have discussed the fault isolation of composite/structural component repairs on the MV-22.
- K. QUESTIONS AND ANSWERS:**

MV-22 MAINTENANCE TRAINING



LESSON GUIDE NUMBER: MV-22 6156 B.10 (D-1 thru D-25)

ORGANIZATIONAL MAINTENANCE FOR COMPOSITE/STRUCTUAL REPAIR

- A. LECTURE NUMBER:** MOS 6156 B.10 (D-01 thru D-25)
- B. TIME:** 1 HOUR
- C. DATE PREPARED:** 24 January 2000
- D. DATE REVIEWED:** On separate sheet
- E. TITLE OF LECTURE:** ORGANIZATIONAL MAINTENANCE FOR
COMPOSITE/STRUCTURAL COMPONENT REPAIR
- F. OBJECTIVE:** The objective of this period of instruction is to introduce and familiarize all maintenance personnel with organizational maintenance for the composite/structural component repairs on the MV-22.
- G. INSTRUCTION AIDS:** A1-V22AB-OTIS-000
- H. REFERENCE:** IETM (S/S/S 5100) Corrective Actions
- I. PRESENTATION:**
1. Present to the student(s) a presentation on organizational maintenance for the composite/structural component repairs on the MV-22.
 - a. R & R Body Assembly (NORCO).
 - b. Repair Form-In-Place Gasket, Mini Mark IV.
 - c. Repair by R & R Rivet Oversize.
 - d. Repair Aluminum Stiffener (Angel).
 - e. Disbond Skin to Core (Vertical).
 - f. Repair Fastener Hole Delamination.
 - g. Disbond Skin To Core (Horizontal).
 - h. Aluminum Web 1 Bay Doubler With Rivet.
 - i. Aluminum pen Damage With 1 Sided Riveted Doubler.
 - j. Honey Comb Blind Insert R & R.

- k. Honeycomb 1 Side Core Fill.
- l. Honey Comb Floor Panel, 1 Side Face & Core.
- m. Honey Comb Floor Panel Face Sheet & insert.
- n. Honey Comb Floor Panel Face Sheet & Edge Band.
- o. Honey Comb Floor Panel Edge Band Damage.
- p. Honey Comb Core Fill With Copper Mesh.
- q. Honey Comb Core Fill.
- r. Honey Comb Core Replace. 1 Side With Copper Mesh.
- s. Honey Comb Core Replace, 2 Sides Without Copper Mesh.
- t. Honey Comb Core 2 Sided, Replace 1 With Copper Mesh.
- u. Delamination Repair at an Edge.
- v. Delamination Repair Without Edge Damage.
- w. Repair Surface Damage, Negligible.
- x. Disbond Repair With Fasteners.
- y. Replace Click Studs.

J. SUMMARY: During this period of instruction we have discussed organizational maintenance for the composite/structural component repairs on the MV-22.

K. QUESTIONS AND ANSWERS:

MV-22 MAINTENANCE TRAINING



LESSON GUIDE NUMBER: MV-22 6156 B.10 (D-26 thru D-48)

ORGANIZATIONAL MAINTENANCE OF COMPOSITE/STRUCTURAL REPAIR

- A. LECTURE NUMBER:** MOS 6156 B.10 (D-26 thru D-48)
- B. TIME:** 1 HOUR
- C. DATE PREPARED:** 24 January 2000
- D. DATE REVIEWED:** On separate sheet
- E. TITLE OF LECTURE:** ORGANIZATIONAL MAINTENANCE FOR
COMPOSITE/STRUCTURAL COMPONENT REPAIR
- F. OBJECTIVE:** The objective of this period of instruction is to introduce and familiarize all maintenance personnel with organizational maintenance for composite/structural component repairs on the MV-22.
- G. INSTRUCTION AIDS:** A1-V22AB-OTIS-000
- H. REFERENCE:** IETM (S/S/S 5100) Corrective Actions
- I. PRESENTATION:**
1. Present to the student/students a presentation on organizational maintenance for composite/structural component repairs on the MV-22.
 - a. R & R
 - (1) Upper Main Cabin Door 2RS1
 - (2) Lower Main Cabin Door 2RS2
 - (3) Cargo Ramp Assembly 3CB1
 - b. Honey Comb Core Replace, 1 Sided With Copper Mesh.
 - c. Honey Comb Core Replace, 2 Sides Without Copper Mesh.
 - d. Bolted Aluminum, 1 Sided Patch on Aluminum.
 - e. Honey Comb Core Replace, 2 Sides With Copper Mesh.
 - f. Visually Inspect Frame Fastener Hole Damage.

g. R & R

- (1) Side Window (install wet)
- (2) Overhead Window (install wet)
- (3) Fwd Window (install wet)
- (4) Cabin Window (esc hatch)
- (5) Door Window FS 289
- (6) Lookdown Window (install wet)

h. Repair TE Grip Fairing, 1 Sided With Copper Mesh.

i. Repair Metal Structure/Structural Components.

j. R & R Cherry Max/Solid Rivets and Special Fasteners

J. SUMMARY: During this period of instruction we have discussed organizational maintenance for the composite/structural component repairs on the MV-22.

K. QUESTIONS AND ANSWERS: